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Elementary spin excitations in a Heisenberg S=1/2 antiferromagnet with Skyrmions

Belov S., Kochelaev B.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

The elementary spin excitations in two-dimensional Heisenberg antiferromagnets with spin S=1/2 in a metastable, spatially inhomogeneous state are investigated. The energy spectrum of the excitations, the local order parameter, and the temperature dependence of the spin correlation length are found. It is shown that the results obtained can be used to explain the experimental data on neutron scattering in La2CuO4 at temperatures T>TN. © 1997 American Institute of Physics.